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动物分类学报

FIRST REPORT OF THE GENUS LATHROMERIS FOERSTER (HYMENOPTERA, TRICHOGRAMMATIDAE) FROM KOREA WITH DESCRIPTION OF ONE NEW SPECIES

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Abstract The genus *Lathromeris* Foerster (Hymenoptera: Trichogrammatidae), including a new species, is newly reported from Korea, *L. koreanica* sp. nov. and a new Korean record species *L. germanica* Girault are described. *L. koreanica* sp. nov. can be distinguished from *Lathromeris balcanica* Nowicki by the abdomen much longer than thorax, subequal to the thorax and head together, antennal club no more than twice the length of scape, only 1.35× length of that, and the fore tibia longer than hind femur.
Key words Hymenoptera, Trichogrammatidae, *Lathromeris*, new species, Korea.

The genus *Lathromeris* Foerster includes species with relatively large body size compared with other trichogrammatids. It is easily confused with *Lathromeroidea*, and both of them have 2 anelli and 5 segmented club as well as similar venation and body color, the latter can be separated by its distinct and straight RS1, and female's club without terminal process, the smaller body size.

Up to now, the genus includes 23 known species in the world, a species from Australian Region, 8 species from Palearctic Region, 3 species from Oriental Region, and 1 species from Nearctic, Neotropical and Afrotropical region respectively. Except 2 species parasitize the eggs of Membracidae, Cercopiedae (Homoptera) and Noctuidae, Pyralidae (Lepidoptera), 1 species parasitizes the larvae of Cecidomyiidae (Diptera), the biological characters and hosts of the remains are unknown.

A study of materials collected from Korea has revealed 1 new species and 1 new recorded species. This is also the first record of the genus in Korea. The specimens studied were collected by sweeping, therefore, its biological data are unavailable right now.

The descriptions are based on specimens slide-mounted in Canadian balsam. All the measurements were taken from slide-mounted specimens at 100×, 200×, or 400× with an Olympus compound microscope and eye-piece reticle. Body length is measured from the anterior margin of the head to the apex of abdomen, excluding the exerted part of the ovipositor. Terminology for morphological features mainly followed Doutt and Viggiani (1968) and Pinto (2006).

All the materials are deposited in the Invertebrate Resources Bank of Korea (IRBK), Seoul National University, Korea and Life Science and Technology College, Xinjiang University, Urumqi, China.

Lathromeris **Foerster**

Lathromeris Foerster, 1856. *Hym. Stud.*, 2: 87.
Lathromerella Girault, 1912. *Mem. Queensland Mus.*, 1: 93.
Garouella Risbec, 1956. *Bull. Inst. Fr. Afr. Noire, Ser. A*, 18: 818.
Lathromeris Foerster: Doutt and Viggiani, 1968. *Proc. Calif. Acad. Sci.*, 35 (20): 504-505; Lin, 1994. *Fujian Sci. and Tech. Publ. House, China*, 109-113; John D. Pinto, 2006. *J. Hym. Res.*, 15 (1): 97-100.

Type species. *Lathromeris sautellaris* Foerster
Type locality. Germany.
Distribution. Korea, China, Denmark, Russia, Poland, Hungary, Bulgaria, Cameroon, Italy, Australia, Argentina, Uruguay.
Host. Lavae of Cecidomyiidae, eggs of Homoptera, Lepidoptera.

Diagnosis. Antenna with 2 anelli and 5-segmented club, first anellus large and distinct, second scale-like and appressed to first club segment; female's club terminating in a rod-like spicule. Venation with an elongate, straight marginal vein and a distinct stigmal vein; RS1 absent or rarely poorly indicated. Ovipositor enclosed in a hypogynium with pale, lobed extensions. Genital capsule with lateral parameres or not, ventral setae and apodemes present.

Key to species of Lathromeris **from Korea**

Fore wing with fuscated area under venation, distinct constriction between stigmal and marginal vein; male genitalia without parameres …… Lathromeris koreanica **sp. nov.**

Fore wing without fuscated area under venation, no distinct constriction between stigmal and marginal vein; male genitalia with parameres …… Lathromeris germanica (**Girault**)

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Lathromeris koreanica **sp. nov.** (Figs. 1-3)

Male body length: 1.11-1.20 mm (n = 2), body color dark brown except antenna brown, base and apex of femora and tibiae and tarsomeres Ⅰ and Ⅱ light yellow, forewing disk subhyaline, light yellow brown with a fuscated area under premarginal and stigmal vein.

Head round, 1.23 × as wide as long (27∶22). Mandible trapezoid with 3 distinct denticles, maxillary palp 1-segmented, subcylindrical, 4 × as long as wide (8∶2), with a short and stout cylindrical sensillum at apex, 0.3 × length of palp (2.5∶8.0), terminal seta shorter than palp (5∶8). Antenna (Fig. 1) slender, length/width of scape, pedicel and club: 40/13, 23/13, 55/15. A1 longer and wider than A2 which is closely appressed to C1, club narrow, length/width of club segments: 6/10, 8/12, 12/15, 11/14, 15/8, C3 and C4 much wider than other club segments; C5 much longer than remains club segments. Club sensilla sparse, C3, C4 and C5 with 1 PLS (placoid sensilla) respectively, setae on the club relatively sparse and straight, without a terminal process.

Length/width of thorax: 34/27. Midlobe of mesoscutum and scutellum with 2 pair of moderately long, subequal setae respectively, mesoscutum and scutellum with reticulate sculpturing. Fore wing (Fig. 2) elongate round, 2.5 × as long as wide (70∶28), venation elongate, narrow, attaining 0.53 × FWL (37∶70), Fringe setae moderately elongate, 0.36 × FWW (10∶28); venation ratio: submarginal 16: premarginal 6: marginal 12: stigmal 5, marginal vein 2 × as long as premarginal vein, 2.4 × as long as stigmal vein. Apical 1/4 of premarginal vein and basal 1/9 of marginal vein poorly sclerotized colorless; stigmal triangle, with a slight but distinct constriction between stigmal and marginal vein; submarginal vein with 2, premarginal with 2, and marginal vein with 3 elongate dorsal setae respectively, additionally, marginal vein with 7 short ventral setae. Setae on the disk starting from the area under marginal vein, disk moderately densely setose, satae short and arranged in 14 distinct lines. Hind wing (Fig. 2) much shorter than fore wing, length/width: (50∶6), with 2 complete linear setal tracks, setae short, fringe length subequal to that of fore wing. The ratios of each leg segment as follows Table 1.

Table 1.

	Fore leg	Middle leg	Hind leg
Femur	17	11	10
Tibia	13	19	24
Tarsus	4, 4, 5/13	4, 5, 6/15	6, 5, 6/17

Abdomen much longer than thorax, its length/width: (60∶34), genital capsule (GC) (Fig. 3) with length 0.38 × hind tibia length (9∶24), lateral parameres (PAR) absent, ventral setae and a pair of apodemes (AAP) present.

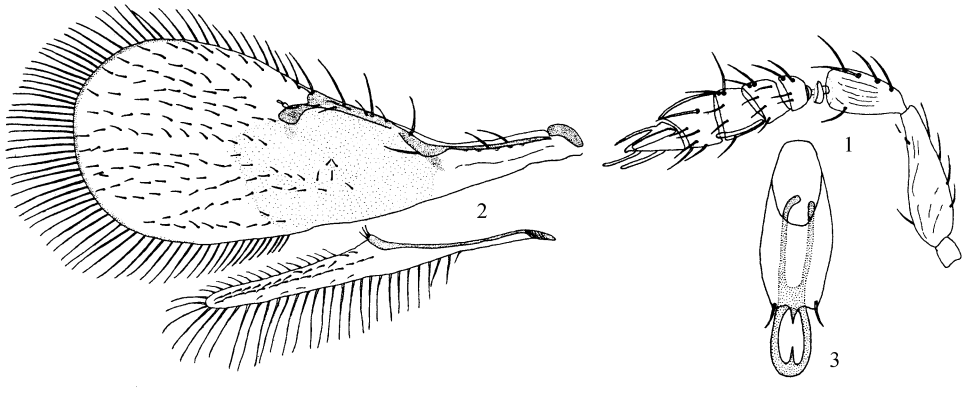
Holotype ♂, Korea, Geongsang bukdo, Yeongcheon (35°59′N, 128°49′E); 3 Aug. 2006, coll. HU Hong-Ying. Paratype, 1 ♂, same data as holotype.

Host. Unknown.

Distribution. Korea (Geongsang bukdo, Yeongcheon).

The Holotype is deposited in the Invertebrate Resources Bank of Korea (IRBK), Seoul National University, Seoul, Korea, and the Paratype is deposited in the Life Science and Technology College, Xinjiang University, Urumqi, China.

Remarks. This species is similar to *Lathromeris tumiclavata* Lin, but can be easily distinguished from the latter by the distinct fuscated area under premarginal and stigmal vein; Apical 1/4 of premarginal vein and basal 1/9 of marginal vein poorly sclerotized colorless.



Figs 1-3. *Lathromeris koreanica* sp. nov., ♂. 1. Antennae. 2. Fore wing and hind wing. 3. Male genitalia.

Lathromeris germanica **(Girault) New record to Korea** (Figs. 4-7)

Lathromerella germanica Girault (1914): 149.
Ophioneurus germanicus Kryger (1919): 297-298.
Lathromeris germanica (Girault) (1968): 504.

Female. Body length 1.09-1.32 mm (n = 4), body brown except antenna, tibiae and tarsomeres Ⅰ and Ⅱ light yellow, fore wing disk subhyaline, light yellow brown without distinct fuscated area under venation.

Head round, 1.52 × as wide as long (23∶15). Mandible trapezoid with 3 distinct denticles, maxillary

palp 1-segmented, subcylindrical, 4× as long as wide (8∶2), with a short and stout cylindrical sensillum at apex, 0.5× length of palp (4∶8), terminal seta longer than palp (10∶8). Antenna (Fig. 4) slender, length/width of scape, pedicel and club: 39/7, 26/13, 51/116. A1 longer and wider than A2 which is separated slightly from C1, club narrow, length/width of club segments: 5/12, 7/14, 13/18, 12/14, 14/10, C3 much wider than other club segments; C5 is the longest club segment, subequal length to C3. Club sensilla sparse, C3, C4 and C5 with 2, 1, 2 PLS (placoid sensilla) respectively, setae on the club relatively sparse and straight, terminal process long, same or subequal length to C5.

Length/width of thorax: 35/25. Midlobe of mesoscutum with 2 pairs and scutellum with 1 pair of moderately long, subequal setae, mesoscutum and scutellum with reticulate sculpturing. Fore wing (Fig. 5) elongate round, 2.62× (2.41-2.62×, n = 5) as long as wide (76∶29), venation elongate, narrow, attaining 0.53× FWL (40∶76), Fringe setae short, 0.24× FWW (7∶29); venation ratio: submarginal 12: premarginal 8: marginal 15: stigmal 4, marginal vein nearly 2× as long as premarginal vein, 3.75× as long as stigmal vein; apical premarginal vein and basal marginal vein poorly sclerotized colorless; stigmal slender cylindrical, with a indistinct constriction between stigmal and marginal vein; submarginal vein with 1, premarginal with 2, and marginal vein with 3 elongate dorsal setae respectively, additionally, marginal with 7 short ventral setae. Setae on the disk starting from the area under the middle of marginal vein, disk moderately densely setose, satae not much short, most setae arranged irregularly except several linear tracks in anterior section of disks. RS1 present. Hind wing (Fig. 5) much shorter than fore wing, length/width: (61∶5), with 3 complete linear setal tracks, setae short, fringe longer than that of fore wing. The ratios of each leg segment as follows Table 2.

Table 2.

	Fore leg	Middle leg	Hind leg
Femur	17	13	16
Tibia	13	21	24
Tarsus	5, 6, 6/17	6, 7, 6/19	6, 6, 6/18

Abdomen much longer than thorax, longer than the head and thorax together (68∶52), length/width: 68∶40. Ovipositor short, 1.29× length of hind tibia (31∶24), inserted at 1/3 apex of abdomen, not exserted.

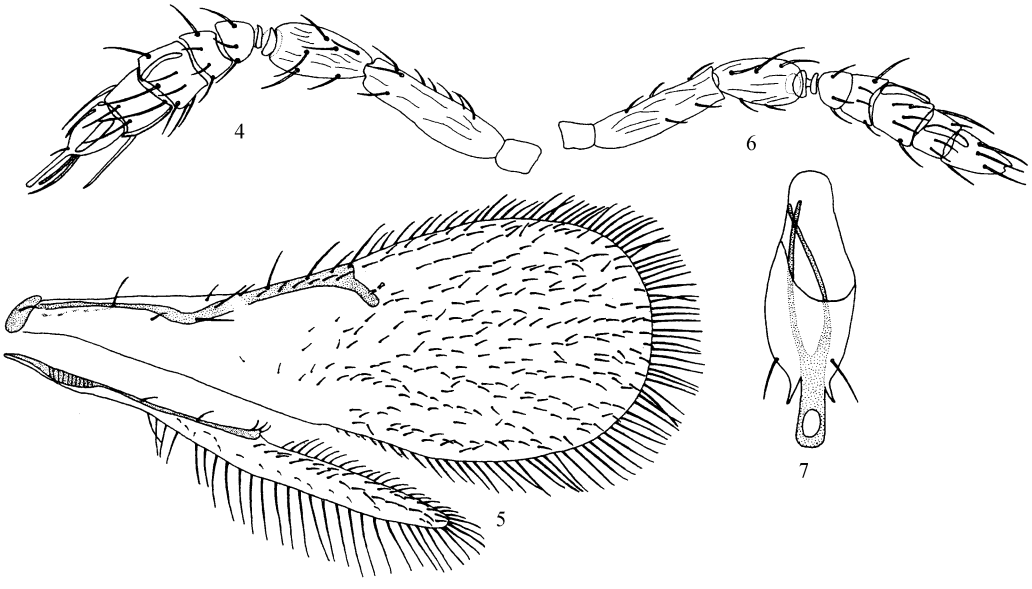
Male. Body length 1.09 mm (n = 1). As female except antennal (Fig. 6) C5 much longer than C3 and without terminal process; disk setae tracks on fore wing more regular than the female's, RS1 present, but indistinct. genital capsule (GC) (Fig. 7) with length 0.42× hind tibia length (10∶24), lateral parameres (PAR) well developed, ventral setae and a pair of apodemes (AAP) present.

Material examined. 2♀♀, Korea: Gyeonggi do, Gapyeong Gun (37°46′N, 127°26′E), 25 June 2006, coll. HU Hong-Ying; 1♀, 1♂, Korea: Gyeonggi do, Yangpyeong Gun (37°33′N, 127°34′), 14 May 2006, coll. Park Yungchul; 1♀, Korea, Seoul, campus of Seoul National University (37°27′N, 126°57′E), 23 June 2006, coll. LIU Zhi-Zhen.

Host. Unknown.

Distribution. Korea (Gyeonggi do, Gapyeong Gun, Yangpyeong Gun; Seoul); German.

All material is deposited in the Invertebrate Resources Bank of Korea (IRBK), Seoul National



Figs 4-7. *Lathromeris germanica* (Girault) 4. Female antennae. 5. Fore wing and hind wing. 6. Male antennae. 7. Male genitalia.

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韩国新纪录属纹翅赤眼蜂属及一新种记述 (膜翅目, 赤眼蜂科)

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摘 要 首次报道了纹翅赤眼蜂属 *Lathromeris* Foerster 在韩国的分布, 并记述了 1 个新种 *Lathromeris koreanica* Hu, Lin *et* Kim 与 1 个新纪录种 *Lathromeris germanica* Girault。新种 *Lathromeris Koreanica* 与 *Lathromeris tumicalvata* Lin 相似, 但新种缘前脉到痣脉下有明显的暗褐色斑块; 缘前脉端部 1/4 处和缘脉基部 1/9 处有断痕。

关键词 膜翅目, 赤眼蜂科, 纹翅赤眼蜂属, 新种, 韩国.

中图分类号 Q969.54